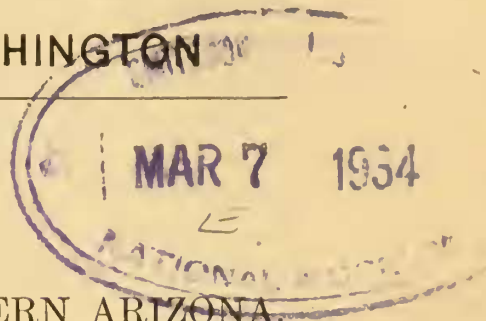


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

THREE NEW RODENTS FROM WESTERN ARIZONA.

BY E. A. GOLDMAN.

Study of specimens collected in western Arizona for use in connection with a report on the mammals of the State has resulted in the discovery of three hitherto unnamed, or unrecognized, subspecies. These are described as follows:

***Thomomys fulvus suboles*, subsp. nov.**

COLORADO RIVER POCKET GOPHER.

Type.—From alluvial bottom at Old Searchlight Ferry, Colorado River (northwest of Kingman), Arizona (altitude 1,000 feet). No. 244,163, ♂ adult, U. S. National Museum (Biological Survey collection), collected by Luther Chase Goldman, September 26, 1923. Original number 17.

Geographic range.—Probably limited to alluvial bottom lands extending for a few miles along the Colorado River, near Old Searchlight Ferry, Arizona.

General characters.—A small, light-colored subspecies, most closely allied to *Thomomys fulvus desertorum*, but more ochraceous tawny and skull differing especially in remarkable angularity. Much paler than *T. f. fulvus*, and differing in much the same cranial details as from *desertorum*.

Color.—*Type* (molt about two-thirds complete, extending backward from head, leaving rump in summer pelage being replaced): General tone of upper parts near ochraceous-tawny, inclining toward tawny on cheeks, shoulders, and unmolted portion of rump; ears and post-auricular patches black; lips dusky; throat and outer sides of forearms light buffy; under parts in general dull white (varying in some specimens to pale buff), the plumbeous basal color showing through; feet whitish; tail light buffy above, whitish below.

Skull.—Similar to that of *T. f. desertorum*, but narrower, more angular, and heavier in details of structure; ascending branches of premaxillae broader; zygomata, especially maxillary arms, decidedly broader, with acutely projecting lateral angles; jugal broader at point of attachment to maxilla; auditory bullae smaller, less smoothly rounded. Compared with

that of *fulvus* the skull is smaller and differs notably in heavier, more squarely spreading zygomata.

Measurements.—*Type*: Total length, 227 mm.; tail vertebrae, 75; hind foot, 30. Average and extremes of four adult male topotypes: 213 (205–223); 65 (58–75); 28 (26–30). Average and extremes of three adult female topotypes: 185 (182–188); 56 (52–61); 24 (23–25.5). *Skull* (type): Greatest length (median line, front of incisors to upper margin of foramen magnum), 39.4; length of nasals, 14.4; zygomatic breadth, 24; mastoid breadth, 18.4; interorbital breadth, 6.8; alveolar length of upper molar series, 7.4.

Remarks.—The range of *Thomomys fulvus desertorum* includes the Detrital Valley and neighboring valleys at 3,500–4,000 feet altitude, northwestern Arizona. Along the western side of this general range a rocky ridge bearing little soil, and therefore unfavorable as a habitat for pocket gophers and tending to stand as a barrier, forms the top of the escarpment flanking the Colorado River in the Pyramid Canyon section. In an embayment of the escarpment, and between it and the river, near the Old Searchlight Ferry are alluvial bottoms consisting of soft, sandy soil overgrown with mesquite (*Prosopis*), Gregg Acacia (*Acacia greggi*), and other vegetation. These bottoms, above ordinary flood stages of the river, extend for several miles until interrupted by cliffs rising abruptly from the water. On the bottoms *Thomomys fulvus suboles* was found abundant. It appears to be a well-marked offshoot of the more widely ranging type of animal inhabiting the tableland above, and beyond, the escarpment described.

Specimens examined.—Eleven, all from the type locality.

***Perognathus baileyi domensis*, subsp. nov.**

CASTLE DOME POCKET MOUSE.

Type.—From Castle Dome (at base of Castle Dome Peak), Arizona (altitude 1,400 feet). No. 248,002, ♀ adult, U. S. National Museum (Biological Survey collection), collected by George G. Cantwell, April 13, 1927. Original number 2882.

General characters.—Closely allied to *Perognathus baileyi baileyi*, but general color of upper parts decidedly paler, the lighter element ashy gray instead of ochraceous buffy, and overlying dusky hairs much less conspicuous; buffy lateral line (usually present and distinct in *baileyi*) faint or absent. Similar to *P. b. rudinoris* but color much grayer and cranial characters distinctive.

Color—*Type*: Upper parts in general ashy gray, finely and rather inconspicuously overlaid with black hairs which are most numerous on top of head; under parts, fore limbs, and hind feet white; tail light brownish above, whitish below.

Skull.—About as in *P. b. baileyi*. Compared with that of *P. b. rudinoris* the skull differs in detail as follows: Rostrum broader; ascending branches of premaxillae broader and only slightly exceeding nasals in posterior extension (premaxillae reaching well beyond nasals in *rudinoris*); mastoid and auditory bullae slightly larger.

Measurements.—*Type*: Total length, 222 mm.; tail vertebrae, 125; hind foot, 28. Average and extremes of seven adult topotypes: 221 (210–228); 118 (110–125); 27.5 (26–28). *Skull* (type): Greatest length, 29.5; greatest width (between outer margins of auditory processes, 16.2); greatest zygomatic width, 16.1; interorbital constriction, 7.3; length of nasals, 10.4; interparietal, 6.5 x 4; maxillary toothrow, 4.2.

Remarks.—Typical *Perognathus baileyi* is now known from a considerable number of localities within a comparatively narrow strip of territory extending north from the type locality, Magdalena, Sonora, to the Salt River Valley in east-central Arizona. Previous collecting had failed to reveal its presence in the western part of the state and the discovery of a new form in that region is therefore of considerable interest. *P. baileyi* appears to be a species of rather irregular or sporadic occurrence, but future field work will probably add materially to its known range. The rather slight differential characters indicate probably intergradation of *P. b. domensis* with *P. b. baileyi* to the eastward of the type locality. It requires no close comparison with *P. b. rudinoris* of Lower California.

Specimens examined.—Ten, all from the type locality.

***Sigmodon hispidus plenus*, subsp. nov.**

COLORADO RIVER COTTON RAT.

Type.—From Parker, Arizona (altitude 350 feet). No. 181,086, ♂ adult, U. S. National Museum (Biological Survey collection), collected by E. A. Goldman, February 2, 1913. Original number 21819.

Geographic range.—Colorado River Valley, above the confluence of the Colorado and Gila rivers, as far north as Needles, California.

General characters.—A large, pallid subspecies, most nearly related to *Sigmodon hispidus eremicus*, but usually much larger, with skull more massive and differing in detail; color about as in *eremicus*. Approaching *S. h. arizonae* in size, but paler and cranial characters distinctive.

Color.—*Type*: Upper parts pale buff, tending toward rusty on rump, moderately mixed or lined on top of head and back with blackish which, however, leaves the general tone rather light; under parts, ears, and feet dull whitish, or grayish, as usual in the group; tail light brownish above, grayish below.

Skull.—Similar to that of *S. h. eremicus*, but larger and more massive, in the older adults rather more elongated; rostrum much broader and heavier; interparietal larger; auditory bullae slightly larger, more inflated; dentition heavier. Somewhat similar to that of *S. h. arizonae*, which it nearly equals in size, but supraorbital ridges in adults less prominent, less upturned; parietals less extensively developed below temporal ridges; dentition heavier.

Measurements.—*Type*: Total length, 316; tail vertebrae, 147; hind foot, 36.5. An adult male from Needles, California: 328; 139; 37. *Skull* (type): Greatest length, 36.8; zygomatic breadth, 21.7; interorbital breadth, 5.5; nasals, 13.8; width of braincase (immediately in front of descending process of supraoccipital), 15; width of rostrum (maxillae at

antorbital notch), 7; interparietal (at median line), 2.7; maxillary tooth-row, 6.6.

Remarks.—Although closely allied to *Sigmodon hispidus eremicus*, which inhabits the lower Colorado and the Gila river valleys, this geographic race is readily distinguished by the larger skull, with rostrum decidedly heavier, and interparietal more extended antero-posteriorly. Only a few specimens have been collected, but these exhibit uniformly well-marked cranial differences in comparison with series of typical *eremicus* now available from various localities, and which collectively establish the range of individual variation in that form. It is not very unlike *S. h. arizonae*, but a fine series of 25 topotypes of the latter reveals distinctive characters that have been pointed out. *Sigmodon h. plenus* appears to be restricted to isolated sections of alluvial bottom along the Colorado River, in a region of extreme general aridity.

Specimens examined.—Seven, from localities as follows:

Arizona: Parker (type locality), 2.

California: Needles, 1; Colorado River (opposite Parker, Arizona), 1; 15 miles southwest of Ehrenberg, Arizona, 3.